

CLAIMS

What we claim is:

1. A chemically synthesized double stranded nucleic acid molecule comprising nucleotide sequence having between 14 and 24 nucleotides complementary to nucleotide sequence of a target RNA or a portion thereof, wherein one of the strands of said double stranded nucleic acid comprises a 5'-cap, a 3'-cap, or both a 5' and 3'-cap.
2. The double stranded nucleic acid molecule of claim 1, wherein said double stranded nucleic acid is an RNA molecule.
3. The double stranded nucleic acid molecule of claim 1, wherein said cap comprises an inverted nucleotide.
4. The double stranded nucleic acid molecule of claim 2, wherein said inverted nucleotide comprises an inverted deoxynucleotide.
5. The double stranded nucleic acid molecule of claim 1, wherein said cap comprises an inverted abasic moiety.
6. The double stranded nucleic acid molecule of claim 2, wherein said inverted abasic moiety comprises an inverted deoxyabasic moiety.
7. The double stranded nucleic acid molecule of claim 1, wherein said nucleic acid comprises one or more 2'-O-alkyl modified nucleotides.
8. The double stranded nucleic acid molecule of claim 1, wherein said nucleic acid comprises one or more 2'-deoxy nucleotides.
9. The double stranded nucleic acid molecule of claim 1, wherein said nucleic acid comprises ribonucleotides, 2'-O-alkyl, 2'-deoxy-2'-fluoro, 2'-deoxy nucleotides or a combination thereof.
10. The double stranded nucleic acid molecule of claim 4 or claim 6, wherein said 2'-O-alkyl is 2'-O-methyl.

11. The double stranded nucleic acid molecule of claim 4 or claim 6, wherein said 2'-O-alkyl is 2'-O-allyl.
12. The double stranded nucleic acid molecule of claim 11 further comprising one or more phosphorothioate internucleotide linkages.
- 5 13. The double stranded nucleic acid molecule of claim 1, wherein said nucleic acid comprises one or more phosphorothioate internucleotide linkages.
14. The double stranded nucleic acid molecule of claim 1, wherein said target RNA is encoded by a mammalian gene.
- 10 15. A composition comprising the double stranded nucleic acid molecule of claim 1 in a pharmaceutically acceptable carrier or diluent.